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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/786,795	02/24/2004	Vieri Vanghi	040003	3351
23596 7590 09/23/2009 QUALCOMM INCORPORATED 5775 MOREHOUSE DR. SAN DIEGO, CA 92121				
			EXAMINER HEIDER, SHANTELL LAKETA	
			ART UNIT 2617	PAPER NUMBER
			NOTIFICATION DATE 09/23/2009	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/786,795

**Applicant(s)**

VANGHI ET AL.

**Examiner**

SHANTELL HEIBER

**Art Unit**

2617

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 July 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11, 13-19 and 21-33 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11, 13-19 and 21-33 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/24/04 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 7/6/09 has been entered.

### ***Response to Arguments***

2. Applicant's arguments filed 7/6/09 have been fully considered but they are not persuasive.
3. Regarding Claims 1, 13, 15, 18, 27, 29 and 33: The applicant argues *Lee, in col. 13, lines 27-30, discloses "the mobile station receives a message including information about the adjacent base stations from the async base station through a broadcast channel."* However, *Lee does not disclose or suggest "wherein the handoff is triggered by the first wireless network based on location information for the wireless device."* as recited in claim 1. (Emphasis added). In contrast, *Lee discloses receiving information about the adjacent base stations, not triggering the handoff based on the location information for the wireless device. Kim does not disclose the above features, and therefore, does not cure the above noted*

**deficiencies of Lee.** See applicant's remarks/arguments, pages 11-12. The examiner respectfully disagrees.

4. Lee discloses FIG. 6 is a diagram illustrating a procedure that the mobile station operating in an async system acquires the timing of a sync system and then performs a handoff to the sync system. The handoff process where the mobile station has already acquired the timing of the sync base station as described in FIG. 5 is similar to the general process for performing a handoff to the sync system. Referring to FIG. 6, the mobile station receives a message including information about the adjacent base stations (i.e., information about the adjacent base stations based on the mobile station location) from the async base station (i.e., async mobile communication system, first wireless network) through a broadcast channel, in step 601. Here, the async base station sends to the mobile station information about the adjacent sync base stations (i.e., sync mobile communication system, second wireless network) together with the pilot offset PILOT\_OFFSET and the frequency band of the individual sync base stations. In step 602, the mobile station measures the strengths of the pilot signals from the adjacent base stations using the received information about the adjacent base stations (i.e., the received information is based on location information for the mobile station in order for the mobile station to receive and measure the strengths of the pilot signals) and sends a message including the measured strengths of the pilot signals to the async base station through the reverse dedicated channel periodically or by request. See Col. 13, lines 20-39.

5. Therefore, Lee discloses "wherein the handoff is triggered by the first wireless network based on location information for the wireless device" as recited in claim 1.
6. Regarding Claim 17: The examiner respectfully disagrees for the same reasons as discussed above.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 7-11, 13, 15, 18, 21-27 and 29-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (Lee), U.S. Patent No. 7,130,284 in view of Kim et al. (Kim), U.S. Publication No. 2001/0016493.

**Regarding Claims 1, 13, 15, 18, 27, 29 and 33**, Lee discloses a wireless device, a method and apparatus operable to communicate with first and second wireless communication networks of different radio access technologies, comprising:

a first modem processor (**first baseband processor 403**) operative to perform processing for a pending call with the first wireless network implementing a first radio access technology from 3<sup>rd</sup> Generation Partnership Project (3GPP) (**async mobile communication system**), receive a first message from the first wireless network to perform handoff to the second wireless network, receive a search message carrying a

list of frequencies to search for cells in the second wireless network **(the mobile station receives a message including information about the adjacent base station from the async base station through a broadcast channel)**, and provide notification of the handoff;

a second modem processor **(second baseband processor 406)** operative to determine pilot acquisition for the list of frequencies and to produce a search result, acquire synchronization and timing for each cell for which pilot acquisition is determined **(the mobile station measures the strengths of the pilot signals from the adjacent base stations using the received information about the adjacent base stations)**, exchange a second message with the second wireless network implementing a second radio access technology from 3<sup>rd</sup> Generation Partnership Project 2 (3GPP2) **(sync mobile communication system)** to establish a new call with the second wireless network, perform a call setup procedure with the second wireless network to establish the new call, and perform processing for the new call with the second wireless network **(the mobile station receives the handoff indication message, including traffic channel information for communication with the sync base station)**; and

wherein the handoff is triggered by the first wireless network based on location information **(the mobile station receives a message including information about the adjacent base stations, i.e., based on the mobile station location)** for the wireless device **(Col. 9, line 62-Col. 10, line 39 and Col. 14, line 51-Col. 15, line 17)**.

Lee fails to disclose determine pilot acquisition for additional frequencies not included in the list of frequencies.

In a similar field of endeavor, Kim discloses a method and apparatus for idle handoff in a cellular system. Kim further discloses determine pilot acquisition for additional frequencies not included in the list of frequencies **(a list of neighboring base stations is transmitted by the current base station to a mobile telephone, the mobile telephone detects a pilot signal from one of the neighboring base stations and determines whether the detected neighboring base station is included in the list of the neighboring base stations; [0059]-[0062]; [0071]; [0072]; [0080] and [0081]).**

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings as described by Lee with the teachings described by Kim to arrive at the claimed invention for maintaining the continuity of the transmission traffic yielding predictable results.

**Regarding Claims 2 and 18,** Lee and Kim disclose further comprising: an application processor operative to receive the notification from the first modem processor, direct the second modem processor to establish the new call, and direct the first modem processor to release the pending call **(Lee-Col. 9, line 62-Col. 10, line 39 and Col. 14, line 51-Col. 15, line 17).**

**Regarding Claim 3,** Lee and Kim disclose wherein the application processor is operative to direct the first modem processor to release the pending call concurrently with the establishment of the new call or shortly after the new call has been established

to minimize disruption of service (**Lee-Col. 9, line 62-Col. 10, line 39 and Col. 14, line 51-Col. 15, line 17**).

**Regarding Claim 7**, Lee and Kim disclose wherein the pending and new calls are voice calls (**Lee-Col. 1, lines 38-50**).

**Regarding Claim 8**, Lee and Kim disclose wherein the first modem processor is operative to maintain a first protocol stack for communication with the first wireless network and the second modem processor is operative to maintain a second protocol stack for communication with the second wireless network (**Lee-Col. 9, line 62-Col. 10, line 39**).

**Regarding Claim 9**, Lee and Kim disclose wherein the second modem processor is operative to perform pilot re-acquisition and cell search, as necessary, obtain updated system information, and perform system access for the second wireless network to establish the new call (**Lee-Col. 14, line 51-Col. 15, line 17**).

**Regarding Claim 10**, Lee and Kim disclose wherein the wireless device is operable to communicate with the first and second wireless networks simultaneously (**Lee-Col. 14, line 51-Col. 15, line 46**).

**Regarding Claim 11**, Lee and Kim disclose wherein the handoff is triggered by the first wireless network based on measurements obtained by the wireless device (**Lee-Col. 14, lines 51-61**).

**Regarding Claim 21**, Lee and Kim disclose wherein the first message from the first wireless network includes information for one or more target cells in the second



wireless network to which the wireless device is handed off (**Lee-Col. 13, lines 27-39 and Col. 14, line 51-Col. 15, line 17**).

**Regarding Claim 22**, Lee and Kim disclose wherein the one or more target cells are determined by the first wireless network based on search results from the second modem processor for a list of frequencies in the second wireless network (**see rejection for claim 21**).

**Regarding Claim 23**, Lee and Kim disclose wherein the second modem processor is further operative to send a second message to the second wireless network indicating successful completion of the handoff to the second wireless network (**Lee-Col. 14, line 51-Col. 15, line 17**).

**Regarding Claim 24**, Lee and Kim disclose wherein the first modem processor is operative to autonomously terminate the pending call with the first wireless network after providing the notification of the handoff (**Lee-Col. 14, line 51-Col. 15, line 17**).

**Regarding Claim 25**, Lee and Kim disclose wherein the application processor is further operative to direct the first modem processor to terminate the pending call with the first wireless network (**see rejection for claim 24**).

**Regarding Claim 26**, Lee and Kim disclose wherein the first wireless network terminates the pending call based on signaling between the first and second wireless networks (**see rejection for claim 24**).

**Regarding Claim 30**, Lee and Kim disclose wherein the first and second modem processors independently perform processing for the first and second wireless networks, respectively (**Lee-Col. 9, line 62-Col. 10, line 39 and Figure 4**).

**Regarding Claim 31**, Lee and Kim disclose wherein the first and second modem processors support concurrent with the first and second wireless networks (**Lee-Col. 9, line 62-Col. 10, line 39 and Figure 4**).

**Regarding Claim 32**, Lee and Kim disclose wherein the first and second modem processors are implemented with separate processors (**Lee-Col. 9, line 62-Col. 10, line 39 and Figure 4**).

7. Claims 4, 14, 16, 19 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee and Kim in view of Singh et al. (Singh), U.S. Publication No 2003/0139184.

**Regarding Claims 4, 14, 16, 19 and 28**, Lee and Kim disclose the wireless device, a method and apparatus wherein the second radio access technology is IS-2000 (**Lee-Col. 1, lines 25-30**) as described above.

Lee and Kim fail to disclose wherein the first radio access technology is Wideband Code Division Multiple Access (**W-CDMA**).

In a similar field of endeavor, Singh discloses a method for performing inter system handovers in mobile telecommunication system. Singh further discloses wherein the first wireless network implements Wideband Code Division Multiple Access (**W-CDMA**) [**0024**], [**0026**] and [**0028**].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings as described by Lee and Kim with the

teachings described by Singh to arrive at the claimed invention for allowing for a mobile user to roam from one region to another where different radio access technologies are covered allowing for calls to be maintained and set up on the existing network.

1. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee and Kim in view of Patel et al. (Patel), U.S. Publication No. 2004/0203469.

**Regarding Claim 5**, Lee and Kim disclose the wireless device wherein the second modem processor is operative to perform a mobile terminated (MT) call setup procedure defined by IS-2000 (**Lee-Col. 1, lines 25-30 and Col. 14, line 51-Col. 15, line 17**) as described above.

Lee and Kim fail to disclose wherein the message is a General Page Message sent by the wireless network.

In a similar field of endeavor, Patel discloses a method of reducing latency for non-call delivery paging. Patel further discloses the message is a General Page Message sent by the wireless network **[0022]**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings as described by Lee and Kim with the teachings described by Patel to arrive at the claimed invention for using a well-known format of a general page message according to TIA/EIA IS-2000 yielding predictable results.

**Regarding Claim 6**, Lee and Kim disclose the wireless device wherein the second modem processor is operative to perform a mobile originated (MO) call setup

procedure defined by IS-2000 (**Lee-Col. 1, lines 25-30 and Col. 14, line 51-Col. 15, line 17**) as described above.

Lee and Kim fail to disclose wherein the message is an Origination Message sent to the wireless network.

Patel discloses the message is an Origination Message sent to the wireless network **[0030]**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings as described by Lee and Kim with the teachings described by Patel to arrive at the claimed invention for requesting establishment of a traffic channel between a device in handoff between two different systems utilizing two different networks yielding predictable results.

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Singh in view of Lee in further view of Kim.

**Regarding Claim 17**, Singh discloses a UMTS (Universal Mobile Telecommunications System) Terrestrial Radio Access Network (UTRAN) comprising: means for processing a pending call with a wireless device in a first wireless network; means for sending a first message to the wireless device to perform a handoff to a radio access network (RAN); means for sending a second message to a UMTS mobile switching center (MSC) to request relocation of the wireless device to another MSC in the RAN; means for receiving an indication of a new call established for the wireless

device with the RAN; and means for terminating the pending call with the wireless device **[0032], [0033] and [0069]-[0071]**.

Singh fails to disclose wherein the radio access network is a cdma 2000; wherein the handoff is triggered by the first wireless network based on location information for the wireless device; means for sending a search message carrying a list of frequencies to search for cells in the second wireless network and means for receiving a search result comprising pilot acquisition determined for the list of frequencies and additional frequencies not included in the list of frequencies, wherein the search result further comprises each cell with which the wireless device acquired synchronization and timing based on the pilot acquisitions.

Lee discloses wherein the radio access network is a cdma 2000; wherein the handoff is triggered by the first wireless network based on location information for the wireless device; means for sending a search message carrying a list of frequencies to search for cells in the second wireless network and means for receiving a search result comprising pilot acquisition determined for the list of frequencies and additional frequencies not included in the list of frequencies, wherein the search result further comprises each cell with which the wireless device acquired synchronization and timing based on the pilot acquisitions. **(Col. 1, lines 25-30 and Col. 13, lines 20-39)**.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings as described by Singh with the teachings described by Lee to arrive at the claimed invention for measuring the strengths of the pilot signals from the candidate cells in a short time.

Singh and Lee fail to disclose additional frequencies not included in the list of frequencies.

Kim discloses additional frequencies not included in the list of frequencies [0059]-[0062].

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the teachings as described by Singh and Lee with the teachings described by Kim to arrive at the claimed invention for maintaining the continuity of the transmission traffic yielding predictable results.

#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shantell Heiber whose telephone number is (571)272-0886. The examiner can normally be reached on Monday-Friday 9:00am-5:30pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edouard Patrick can be reached on 571-272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

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/S. H./  
Examiner, Art Unit 2617  
September 8, 2009

/Patrick N. Edouard/  
Supervisory Patent Examiner, Art Unit 2617